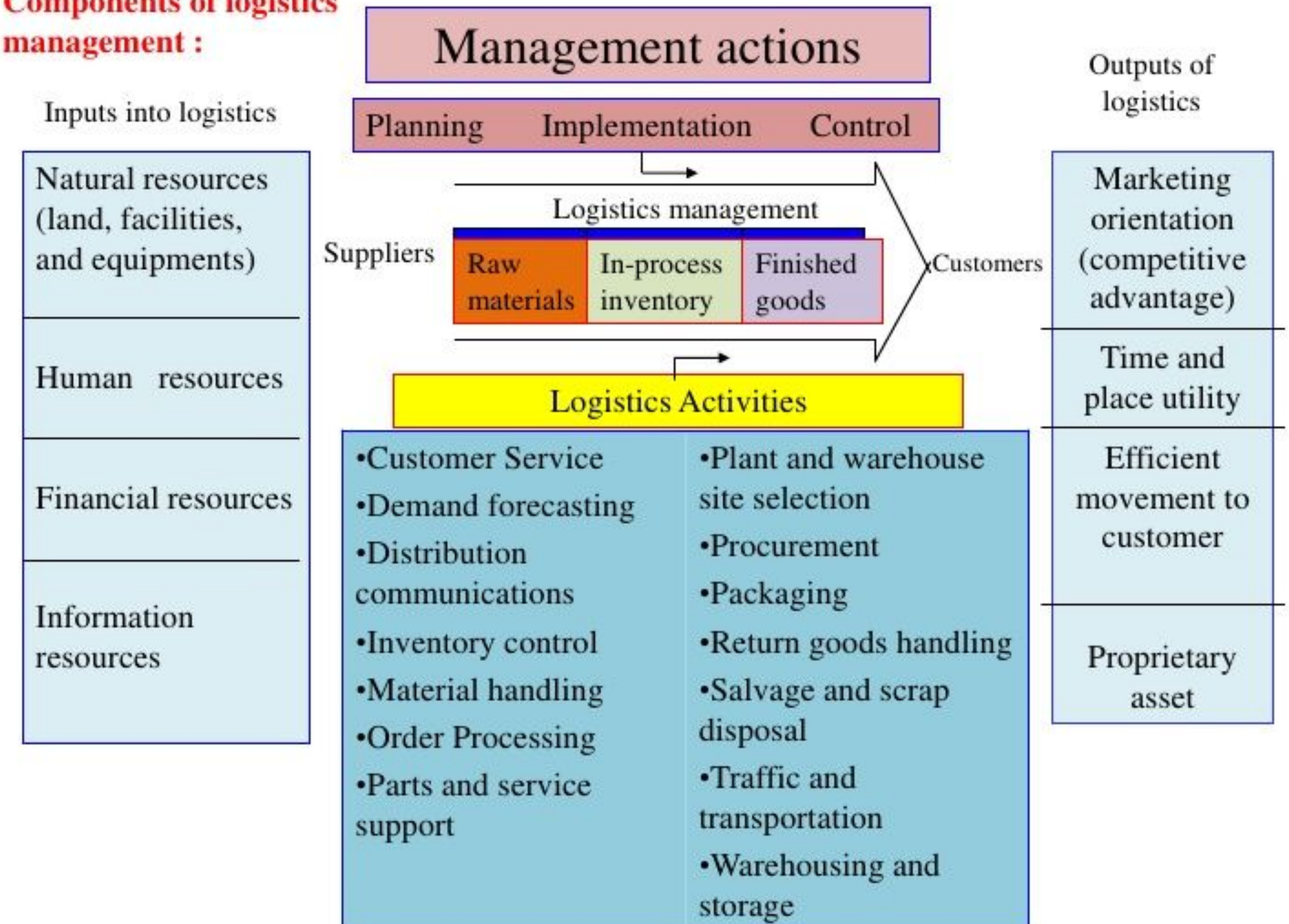
Basics of Logistics

OULUN AMMATTIKORKEAKOULU

Components of logistics management :



Opinto-opas

5K00BJ22	BASICS OF LOGISTICS (3 CR)
Objectives	The student is able to explain logistics and the importance of logistics in the operations of companies and communities. The student is able to analyze influences of logistics on costs, standard of service and competitiveness. In addition, the student is able to describe logistic processes and continue his / her logistics studies further on.
Content	Contents, terms and concepts of logistics. Control of logistics. Decision making in logistics. Assessments of logistic activities. Logistics and the economy of companies. Logistic chains and green logistics. Organisations in logistics. Basics of purchase and warehousing.

Content

1. Terms and concepts of logistics.
2. Control of logistics.
3. Decision making in logistics.
4. Assessments of logistic activities.
5. Logistics and the economy of companies.
6. Logistic chains and
7. Green logistics.
8. Organisations in logistics.
9. Basics of purchase
10. Basics of warehousing.

Content

Kirjallisuutta

– Tilaus-toimitusketjun hallinta (Sakki 2014)
– Johdatus logistiseen ajatteluun (Hokkanen jne. 2010)
– Teollisuustalous (Haverila jne. 2009)
– Kansainväliset tavarankuljetukset (Karhunen ja Hokkanen 2007)
– Logistisen ajattelun perusteet (Hokkanen jne. 2004)
– Logistiikka (Karrus 2001)

Course Material in English

https://wsiz.rzeszow.pl/pl/Uczelnia/kadra/kferet/Documents/Logistics%20Reading.pdf

Global Logistics

Components of Global Logistics

Introduction

– What is Global Logistics
– Logistics Intermediaries
– The Global Supply Chain
– Organizing for Global Logistics
– Strategic Issues in Global Logistics
– Forces Driving Globalization
– Strategies to Enter Global Markets
– Barriers to global logistics
– Conclusion

Challenges

- Global brands and companies dominate most markets today.
- World markets are not homogenous.
- Complex logistics of managing global supply chains may result in higher costs.
- Global logistics operation must accommodate not only domestic requirements, but should also deal with increased uncertainties associated with distance, demand, diversity and documentation.
- wide variety of capabilities and expertise is needed
- Internet has made it easier to do business electronically in any part of the globe, from any point to any point.
- The domain knowledge, connectivity with international cargo carriers, and documentation are the three crucial areas that need to be focused in global logistics.

Definition of Global logistics

Global logistics as the design and management is a system that directs and controls the flows of materials into, through and out of the firm across national boundaries to achieve its corporate objectives at a minimum total cost.

Logistics Intermediaries

- Logistics Intermediaries: These are logistics service providers who have expertise in customs clearance and other formalities of international trade. In import and export business, for the physical movement of cargo, the role of intermediaries is quite indispensable.

Logistics Intermediaries

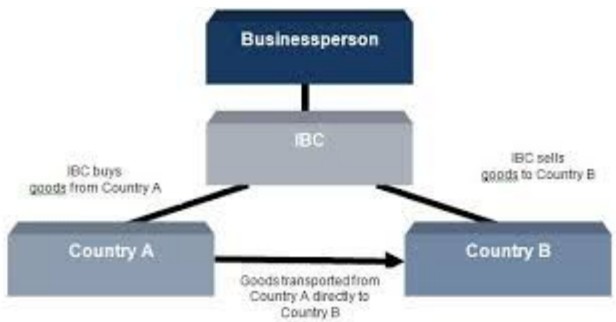
- **Export Management Companies** EMCs are intermediaries that market another firm's products overseas.
- **Export Packers** They assist the exporter with special packaging requirements needed to reach some export markets.
- **Customhouse Brokers** These are usually tied to freight forwarders in exporting nations. The customhouse broker meets the importer's shipment, and guides it through customs seeking to use tariff classifications that involve the smallest charges. Then goods are delivered to the importer's place of business.

Logistics Intermediaries

- **Publication Distributors** Publication distribution firms are specialized intermediaries. For example, an airline company has this service that includes wrapping, destination sorting, addressing, database management, and so on for magazines. Magazines move overseas by air and then are turned to post offices for delivery, saving on international package costs.
- **Goods Surveyors** They are frequently referred to in international trade and are retained by the buyer, seller or both to inspect their quality and retain them.
- **Parts Banks** Several firms, often airlines, offer this service. This helps manufacturers to store important repair parts throughout the world, where they can be quickly flown to customers with equipment "down".
- **Container Leasing Companies** These companies facilitate inter modal movements because they can relieve individual carriers of the financial burdens and control responsibilities they would have if they had to own all of their equipment. Companies lease containers on both a short and long term basis.

Logistics Intermediaries

- **Export trading Companies** Export trading companies are a distinct intermediary. They actually buy the manufacturer's goods, take title, and then sell these goods in the export market. ETCs are customers of manufacturers in selected markets. By selling to an ETC instead of the importer, the manufacturer removes himself from some of the financial risks associated with exporting. Risks include political instability, importer creditworthiness, and the risk of unavailability of foreign exchange.



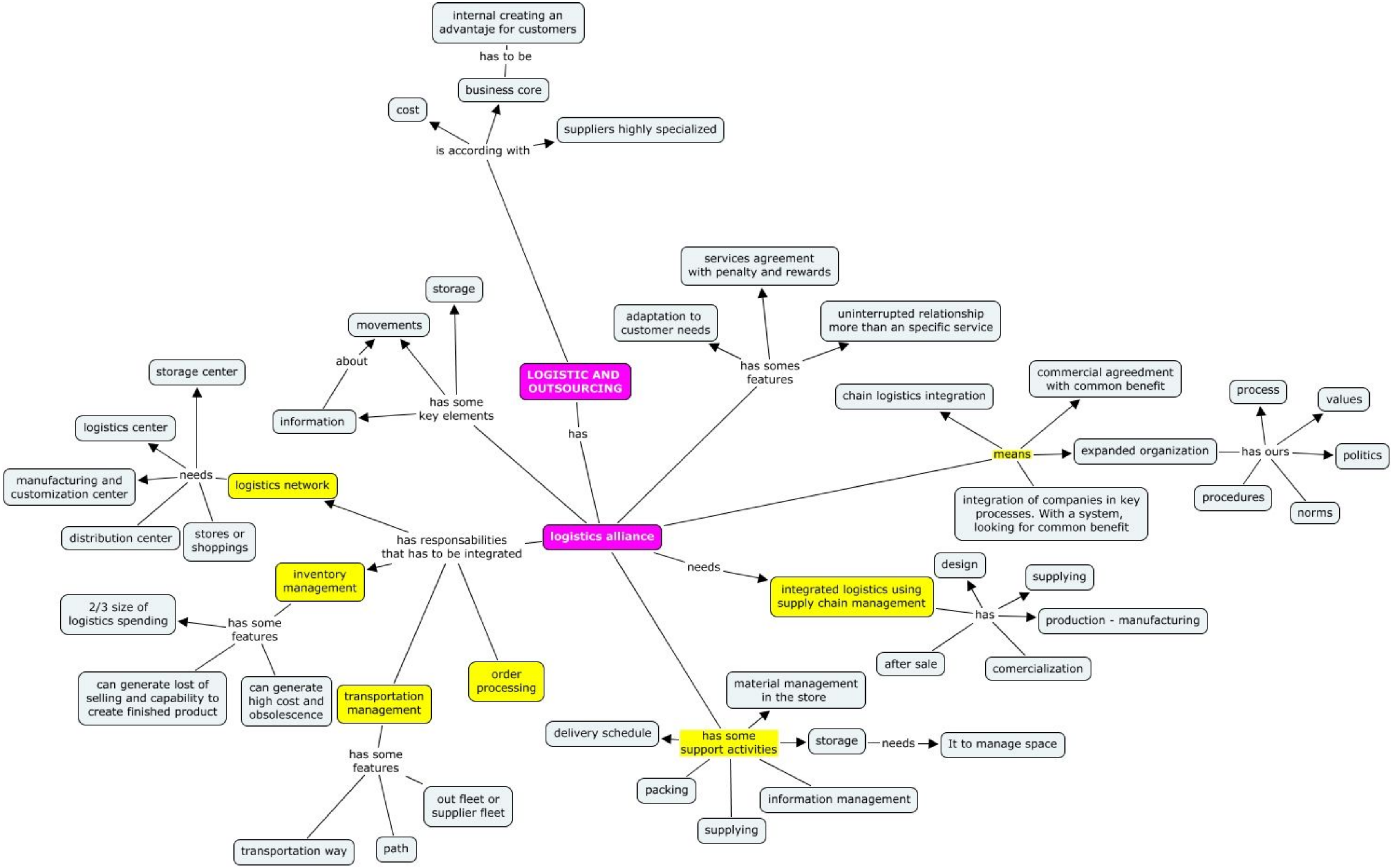
The Global Supply Chain

1 Differences in operations – Major operational differences are as follows:

- Multiple languages are required for both product and documentation for international operations.
- A large amount of documentation is required for international operations.
- Global transportation is complex.

2 Differences in Systems Integration

3 Differences in Alliances



internal creating an advantaje for customers
has to be
business core
cost
suppliers highly specialized
is according with
LOGISTIC AND OUTSOURCING
has
logistics alliance
services agreement with penalty and rewards
adaptation to customer needs
uninterrupted relationship more than an specific service
has somes features
storage
movements
about
information
has some key elements
storage center
logistics center
manufacturing and customization center
needs
logistics network
distribution center
stores or shoppings
has responsabilities that has to be integrated
inventory management
2/3 size of logistics spending
has some features
can generate lost of selling and capability to create finished product
can generate high cost and obsolescence
transportation management
order processing
has some features
out fleet or supplier fleet
transportation way
path
chain logistics integration
commercial agreedment with common benefit
means
expanded organization
has ours
process
values
politics
procedures
norms
integration of companies in key processes. With a system, looking for common benefit
needs
integrated logistics using supply chain management
design
supplying
has
production - manufacturing
after sale
comercialization
material management in the store
delivery schedule
has some support activities
storage
needs
It to manage space
packing
information management
supplying

Organizing for global logistics

- Strategic structuring and an overall control of logistics flows need to be centralized in order to achieve worldwide optimization of costs.
- Control and management of customer service needs to be localized against the requirements of specific markets for gaining competitive advantage.
- There is an increased trend towards outsourcing, which increases the need for global co-ordination.
- A global Logistics Information System (LIS) is absolutely essential for ensuring the achievement of local service needs while seeking global cost optimization.

Strategic Issues in Global Logistics

– **Logistics Planning:** Logistics network planning is crucial for companies with global operations in order to gain competitiveness. Formulating a logistics network strategy also depends on factors such as unit value of the product, markets and competition.
– For example: A firm's strategy to develop new markets and relocate facilities will trigger the need for sourcing of raw materials with reference to the delivery time frame, logistics cost, and reliability. So the formulation of logistics strategies should consider the location of production facilities, sourcing of materials and components and product-market characteristics.

Strategic Issues in Global Logistics

Inventory:

- Make to order or make to stocks: Making to order for delivering products directly to customer can result in a major shift in inventory planning and also reduce inventory levels.
- Consolidating global production into a single or focused factory for catering to needs of various markets can be an approach. Fulfilling the needs of local individual customers or local markets is done through the strategy of rationalization of product design.
- A modular approach to product design, where the product can be configured to its final shape at the distribution center catering to local markets can take care of the local markets.

Strategic Issues in Global Logistics

- **Product variables:** Reach of the logistical system is decided by the unit value of the product. In a globalized marketing environment, firms with low unit value products resort to the local manufacturing system for extending good customer service.

- **Flexibility:** Global players focus on economies of scale for achieving cost advantage. There is inflexibility in this system as responding to a dynamic market and demanding customers can be difficult. Similarly the logistics system associated with the above strategy also becomes inflexible while responding to changing distribution needs. An example can be the emphasis on freight consolidation

Strategic Issues in Global Logistics

Shorter Lead Time:

- Global markets emphasize on responsiveness with a lean supply chain.
- Thus, customers bank on the shortest lead-time for inputs going into the product manufacture in order to compress the performance cycle, extend superior customer service, and simultaneously reduce overall levels of inventory.
- But, in the case of inflexibility in manufacturing system the supplier has to maintain some buffer stock for maintaining the desired level of customer service, thus sacrificing the benefits of lean inventory.

Strategic Issues in Global Logistics

- **Trade barriers and facilitation:** Though the trade barriers have reduced progressively owing to GATT/WTO, the non-tariff barriers have increased, particularly in the developed countries.

- **Cultural Issues:** These can be a problem in global sourcing due to a wide variety of approaches to conducting business in different regions of the world.

Forces Driving Globalization

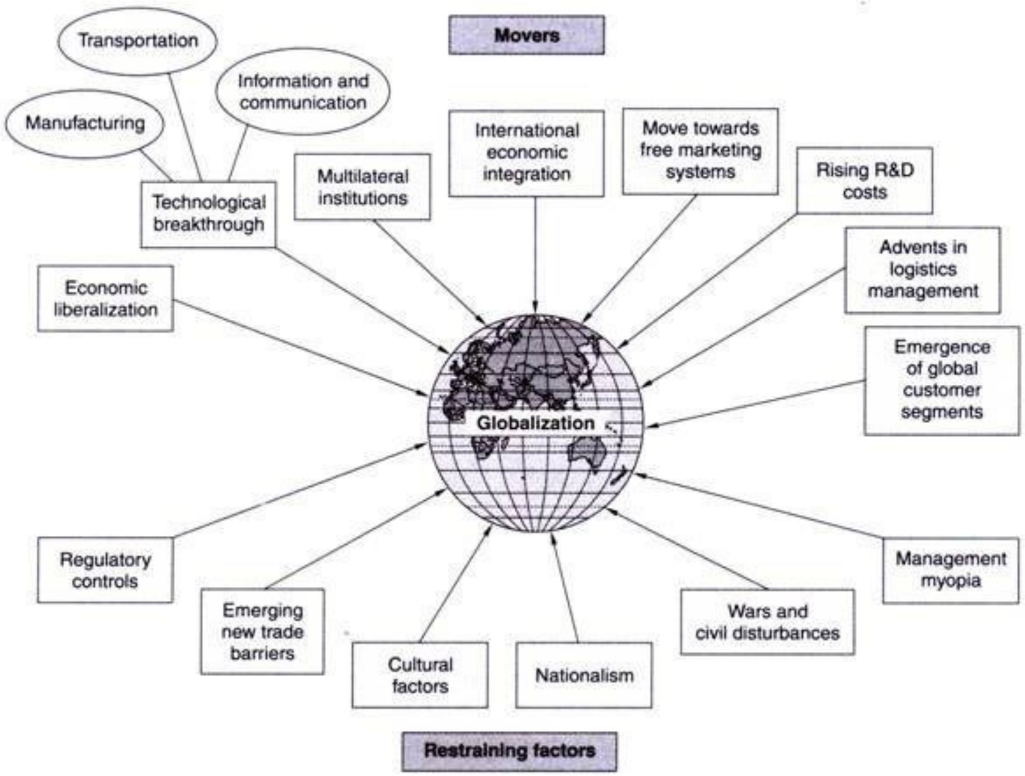


Fig. 1.6 Globalization: Movers vs restraining factors

Forces Driving Globalization

Economic Growth

– A decline in the economic growth of industrialized economies has occurred simultaneously with an increase in the manufacturing and logistics productivity, which has resulted in excess capacity. With this scenario, a most direct means for an enterprise to increase profit and revenue is through global expansion into other developed and developing nations. This expansion requires an integrated global manufacturing with marketing capacities as well as logistics support for the new business location. A pursuit for growth and profit is a major force, which drives enterprises to serve the global markets.

Forces Driving Globalization

Supply Chain Perspective

- Another force is the total supply chain perspective adopted by manufacturers and distributors. A historical view sought that expenses incurred by other channel members were not important while making logistics related decisions. This trend is slowly changing. Also there was a practice that more control on logistics activities can be achieved by doing as many activities as possible internally. Eventually logistics managers found out that they could reduce capital deployed by outsourcing a host of logistics activities. This has led to development of alliances with global suppliers who could provide expertise and also quality service at affordable prices.

Forces Driving Globalization

Regionalization

- When firms decided to expand, they wanted to do this by spreading their wings to nearby geographic regions. To promote regional trade, countries began to enter into treaties and formalize partnerships. There is always an extra time required to accommodate political requirements, which add to the logistics costs without adding value to the ultimate consumer. Though efforts for regionalization have been designed to facilitate trade, continued government restrictions cause logistical bottlenecks.

Forces Driving Globalization

Technology

- Technological development has resulted in an increased capability for exchanging information facilitated by widespread availability of computer as well as communication networks. For instance, today, the total performance cycle time has been reduced through the use of enhanced information technology. Demand for world-class products and services are on the rise as the world has become more real-time oriented.

Strategies to enter global market

Indirect Exporting

Export Trading Company:

- This is an intermediary, which purchases the goods in the exporting company and resells them to a customer in a foreign country.
- ETCs are very large firms, with local offices in many countries. They take title to the goods in the exporting country, making this transaction a domestic transaction for the exporter, and transfer the title to the importer in the importing country, thus making the transaction a domestic transaction as well. For either parties dealing with the trading company, the product is seemingly handled by a domestic company, its foreign origin is not concerned for the buyer, and its sale abroad is not an issue for the seller.
- These trading companies have acquired a lot of information on potential sellers and buyers and they leverage this knowledge into sales.
- These companies offer a complete package of international logistics services such as shipping, insurance and financing international trade.

Strategies to enter global market

Indirect Exporting

Export Management Corporation:

- An EMC is located in the exporting country and is operating as an export-oriented manufacturer’s representative for the exporter.
- EMCs have the tendency to restrict their sales efforts to potential customers in a single country and often specialize in selling a single line of production in that country. Most of them represent more than a single manufacturer abroad, usually in complementary lines.
- The exporter is involved slightly more in the foreign sale as the EMC acts as an agent.
- Thus, the EMC acts as the export department of the seller, handling every detail of the transaction.

Strategies to enter global market

Indirect Exporting

Piggy-Backing:

- This choice is for the reluctant exporter.
- A successful exporter involves one of his suppliers or a company making complementary product in the markets that this exporter has developed.
- This strategy gives an opportunity for a firm to gain knowledge about selling abroad.

Strategies to enter global market

Active Exporting

Agent:

- An agent is usually a small firm or an individual located in the importing country, which acts as a manufacturer's representative for the exporter. Thus the agent does not take title to the goods it sells but earns a commission on the sales it makes.
- The exporter is known as the principal due to the relationship with agent.

Strategies to enter global market

Active Exporting

Distributor:

- A distributor is usually a firm located in the importing country – or sometimes in a neighboring country, which buys goods form the exporter. A distributor takes title to the goods it sells and earns a profit on the sales it makes.
- He takes more risk in his relationship with the exporter than an agent and experiences higher costs. He carries the traditional risks associated with inventory and also invests a considerable sum of money in the inventory.

Strategies to enter global market

Active Exporting

Marketing Subsidiary:

- This refers to a foreign office, staffed by employees of the exporting firm that sells goods in the foreign market.
- It is incorporated in the foreign market, and is the importer on record as far as the foreign government is concerned, and the export takes place between two legal entities that are part of the same company, at a transfer price.

Strategies to enter global market

Active Exporting

Foreign Sales Corporation:

Created in the United States for tax break for exporters. In fact more than a method of entry, it is a way for United States based corporations to lower its income tax.

Strategies to enter global market

Production Abroad

Contract Manufacturing:

- Company enters an agreement with a producer in the foreign market to manufacture its goods.
- Suitable as an entry strategy for markets with significant barriers to entry such as high tariffs and quotas.

Strategies to enter global market

Production Abroad

Licensing:

- Granting of rights to intellectual property owned by a company to another company for a fee.
- Company using the intellectual property has the right only to use the property and for every use has to pay a fee called royalty.
- In the international arena, the licensor is the exporting company and licensee is the foreign company.
- Use of this strategy is when high tariffs or non-tariff barriers, prohibitive shipping costs limit access to market or when licensor is uninterested in actively pursuing the market.

Strategies to enter global market

Production Abroad

Franchising:

- Process by which a firm possessing an array of intellectual property items grants another company the right to use these intellectual property items in exchange for royalties.
- Basically, the franchisee and franchisor are in distinguishable in the eyes of customers.

Strategies to enter global market

Production Abroad

Joint Venture:

- Creation of a new corporation in a foreign country, jointly owned by the joint venture partners in any combination of ownership percentages.
- This strategy minimizes the impact of a possible nationalization.

Strategies to enter global market

Production Abroad

Subsidiary:

- Investment by a firm in a foreign venture.
- Another option is where the firm can relocate an entire plant to a foreign location, for utilizing cheap labor and forgoing the higher costs of a brand new facility.
- Followed by firms who want total control of an investment and are willing to take the risk of such a venture.
- This strategy is more beneficial to the host country as it creates jobs and offers substantial incentives to foreign company that are willing to establish a facility within their borders.

Strategies to enter global market

Parallel Imports:

Goods are sold outside the regular distribution channels of a company, usually because there is a difference between the price charged in one country and the price charged in another.

Modes of Transportation in Global Logistics

Transportation plays a vital role in the movement of cargo within or between countries. Selection of the transportation mode depends upon the following factors

- Location of market
- Cost of transportation
- Speed of cargo transportation
- Reliability of mode

Barriers to Global Logistics

- Markets and Competition
- Financial Barriers
- Distribution Channels

Conclusion

– Implementing a global pipeline control is dependant to a large extent upon the organization’s ability to find a correct balance between central control and local management. Global organizations are expanding and this suggests that there are certain tasks and functions requiring local management and control. International competition has become more intense, due to a gradual reduction in the national barriers. Sophistication of product technology or marketing communications determines the difference between success and failure in the global marketplace.